USGS
science for a changing world

Framework for Public Participation GIS: Options for Federal Agencies

USGS Fort Collins Science Center

September 12, 2012

U.S. Department of the Interior
U.S. Geological Survey

CDI Citizen Science Workshop
September 11 - 12, 2012

Need

- Reduced Resources
  - Staff
  - Monitoring Budget
- Increased Responsibility
  - Large Management Areas
  - Multiple Resource Issues
- Office Turnover
  - Knowledge of Area
  - Issue Awareness
  - Sense of Ownership

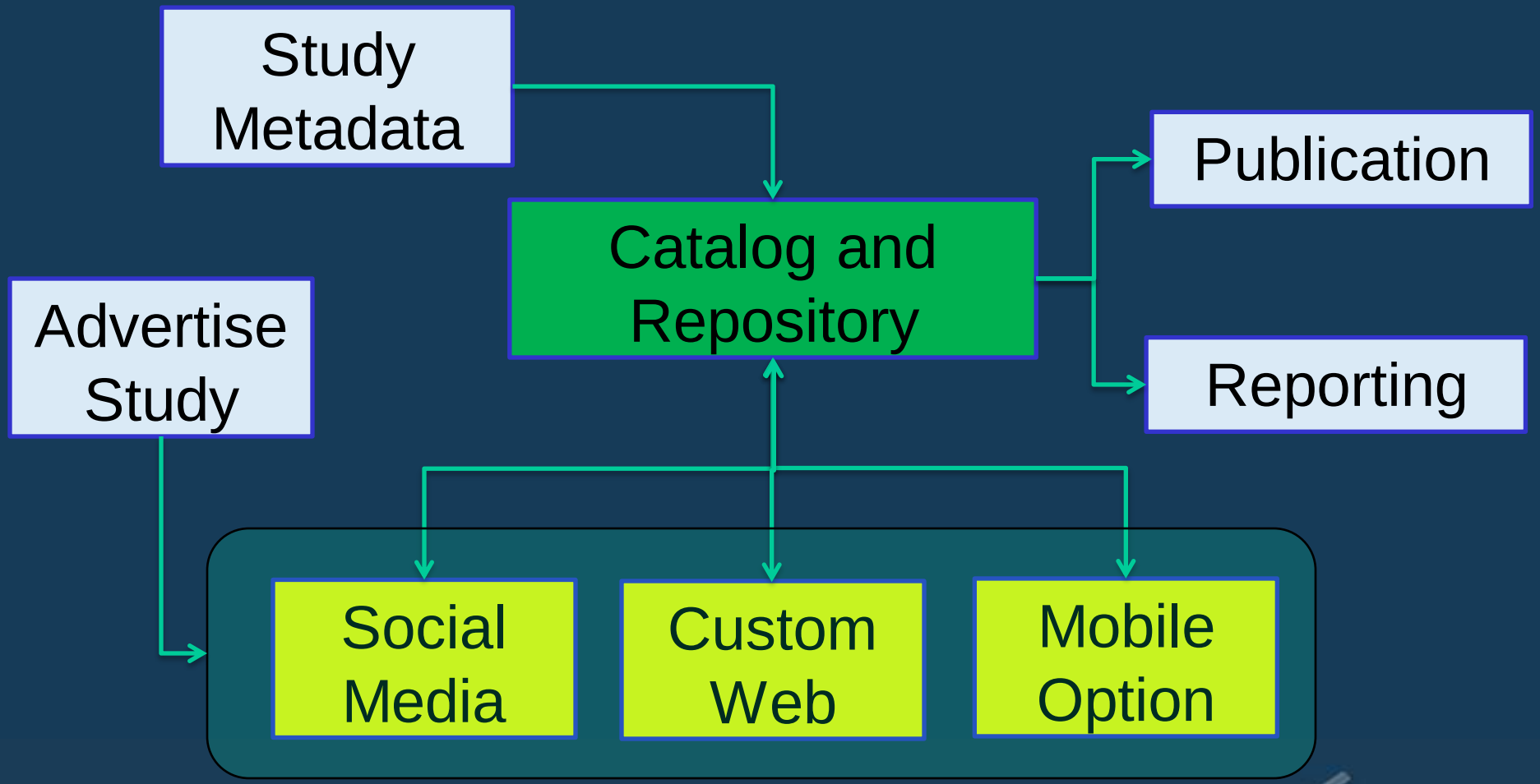
Impedances

- Paperwork Reduction Act (PRA)
  - OMB Approval of Data Collection from the Public
  - Direct Data Collection, Contract, Cooperative Agreement, even some Grants
- Personally Identifiable Information (PII)
  - Location Issues
- Technology Policy
  - Terms of Service (TOS) Reviews
  - Security and Purchasing Blocks
- Data Integrity Requirements

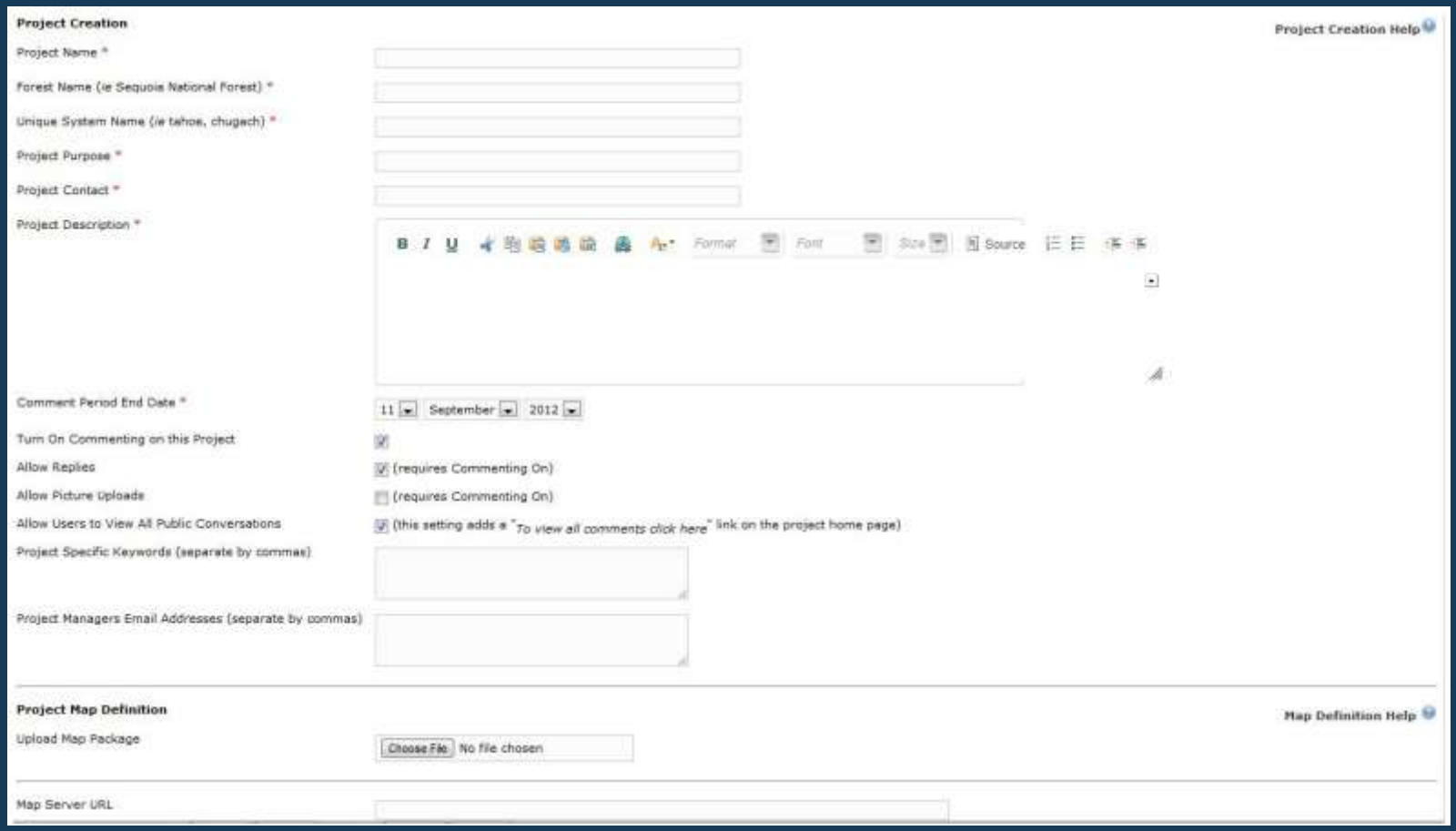
Implementation Within Policy

- PRA
  - Limit inputs to general comments on an identified area
- PII/PIA
  - Hash any personal information
- Technology Policy
  - Write for mobile web
  - Use approved social media APIs
- Data Integrity Requirements
  - Develop metadata in process
  - Early connections to USGS publication process

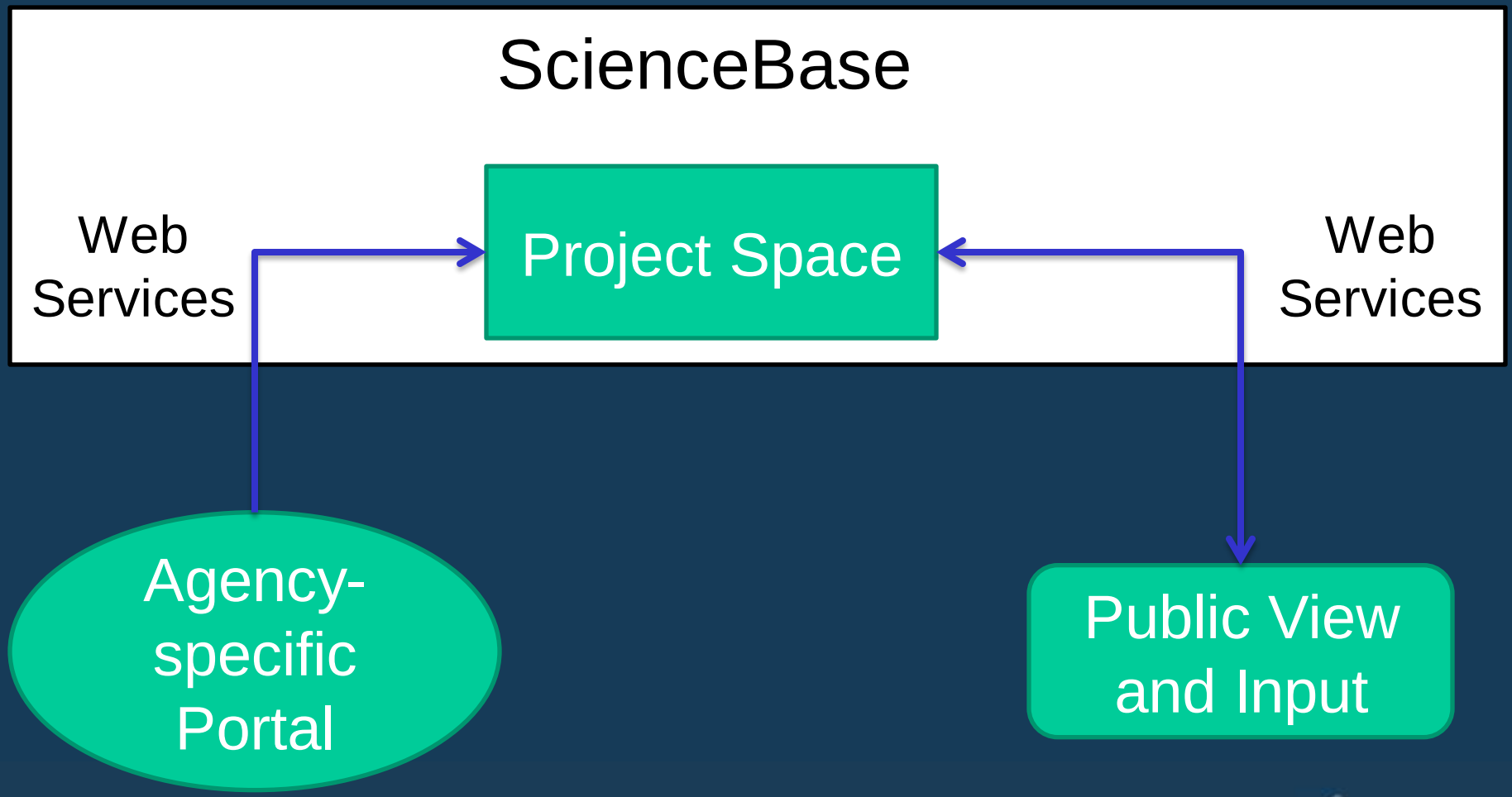
Workflow Overview



Develop Study Metadata



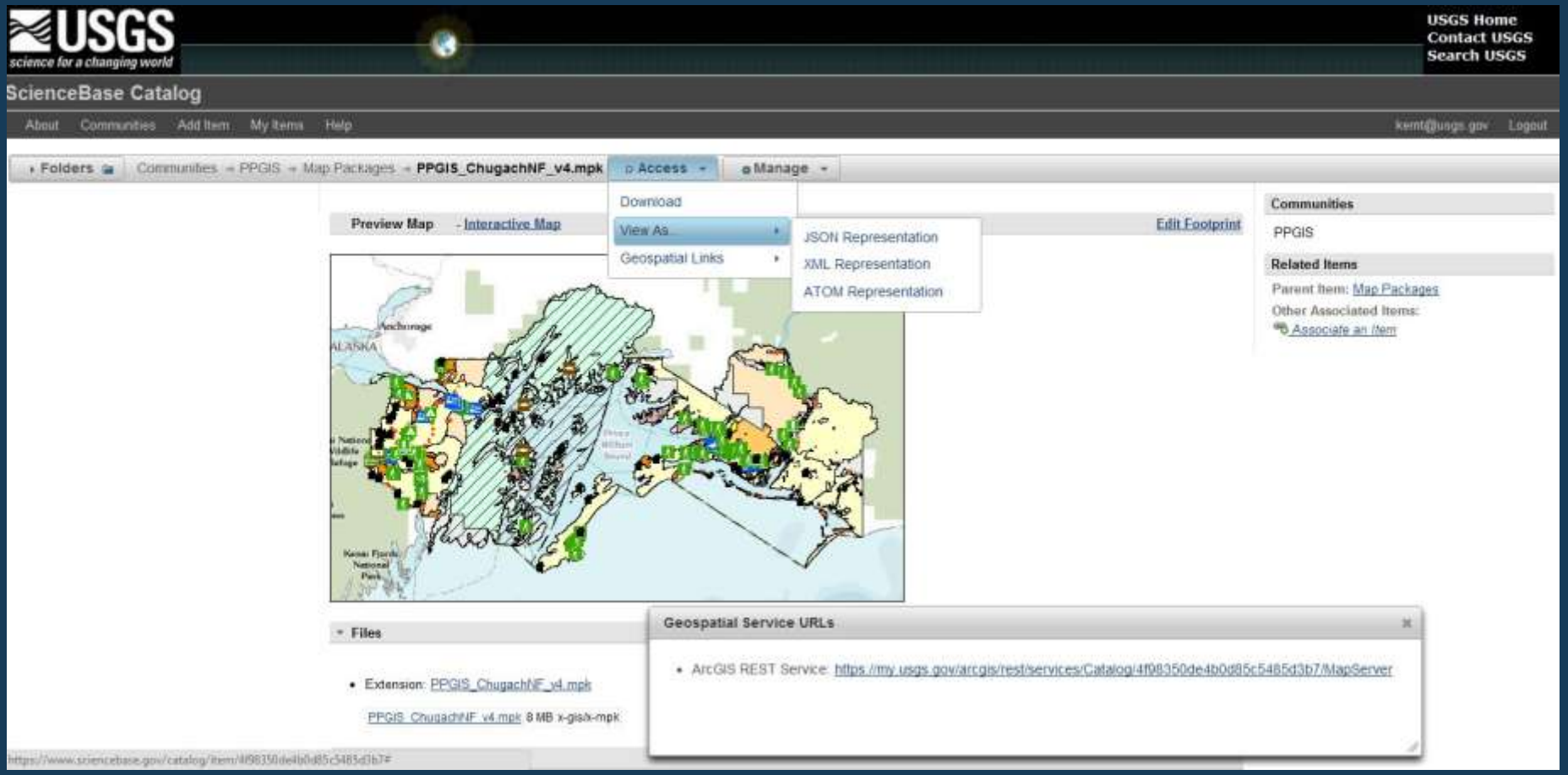
Build Around Secure Enterprise Repository



ScienceBase

- Full Department of Interior security apparatus
- Provides spaces for multiple projects/studies
  - Each study controls its own space
  - Study can keep track of all data products,
  - Lets projects build derivative datasets, track versions, and build metadata
- System takes care of annoying data protection and policy pieces
- Can develop parent-child and association relationships among other studies

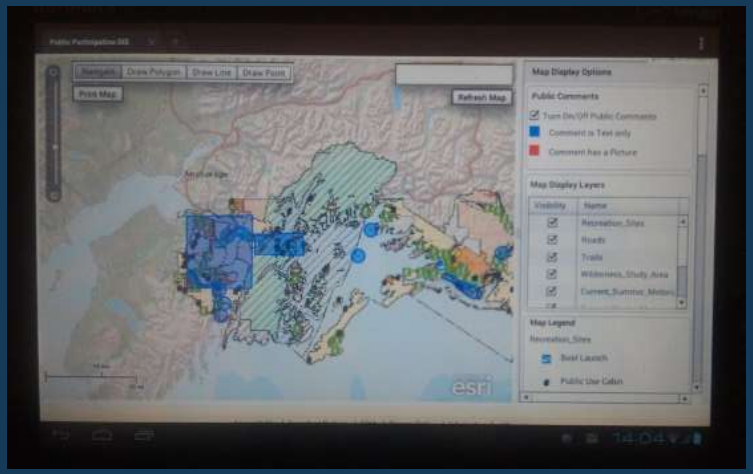
Study Area Load



Data Collection Marketing

- Outreach
  - Community Meetings
  - Local Media
  - Social Media
  - Agency Web Site
- Advertise Access Options
  - Hashtag Publication
  - Site URL
  - App Download

Public Data Input Options

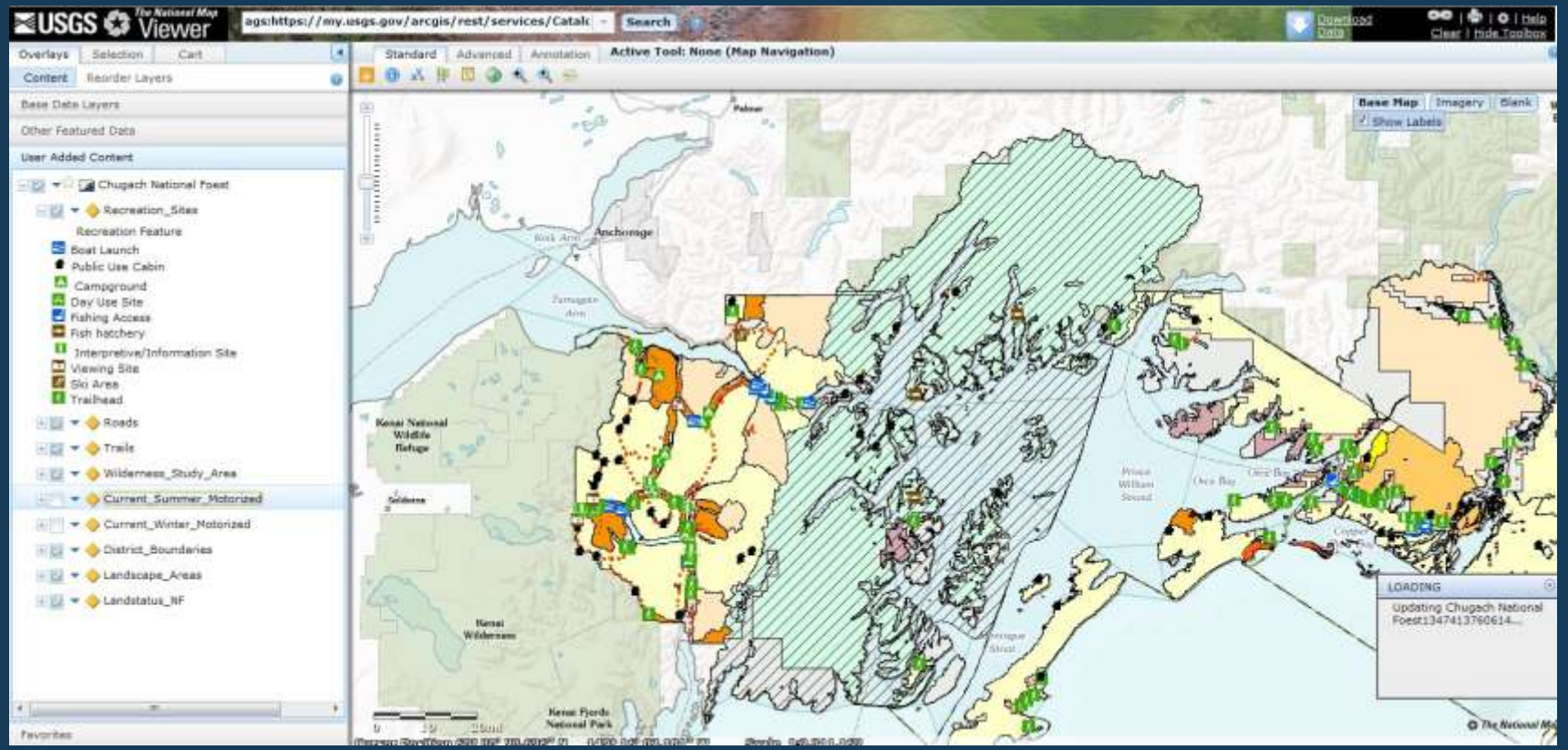


- Develop for multiple screen sizes
- Work around limitations of mobile views
- Need native app for full capability

Automated Input Processing

- Twitter
  - Term harvest
  - Location inference
  - User metadata obfuscation
- Web/Mobile
  - Comment parsing and logic/term identification
  - Comment screening
  - Image metadata scraping
  - Location and spatial data capture

Data Management and Distribution

- Data Publication
  - Metadata Development
  - Approval Workflow
- Data Discovery and Distribution
  - Search
  - Preview
  - Feedback/Analytics
  - Download
  - Multiple Service Endpoints

Publication and Interoperability